ORDER NO. AD9704070A1
A6

Service Manual

COMPACT disc DIGITAL AUDIO

MASH multi-stage noise shaping

※ • MASH is a trademark of NTT.

Portable CD Player

SL-S332C

Colour (S)...Silver Type

Area

P ..... U.S.A.

Please file and use this manual together with the service manual for Model No. SL-S220/S225/S221C, Order No. AD9702018C5.

Notes:
- This simplified service manual is provided to indicate the main differences between the original model No. SL-S220/S225/S221C (P) and the subsequent model No. SL-S332C (P).
  In this service manual a comparison is drawn between the above -stated 3 models and the SL-S221C (P).
- Refer to the Schematic Diagram and Printed Circuit Board and Wiring Connection Diagram and Packaging of this service manual.

CHANGES

Specifications (SL-S220/S225/S221C Service Manual of cover page.)

SL-S221C (P)		SL-S332C (P)	
Playing time		**Playing time**	
Batteries used: Anti-shock OFF/ON		**Batteries used:** Extra anti-shock OFF/ON	
Panasonic Alkaline dry cell batteries(LR6, 2pcs.)	: Approx. 10h/8.5h	**Panasonic Alkaline dry cell batteries(LR6, 2pcs.)**	: Approx. 9.5h/8.5h
General		**General**	
Power consumption (Anti-shock OFF/ON)		**Power consumption (Extra anti-shock OFF/ON)**	

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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■Location of Controls (SL-S220/S225/S221C Service Manual of page 2.)

SL-S221C (P)

Ⓚ XBS selector (XBS)

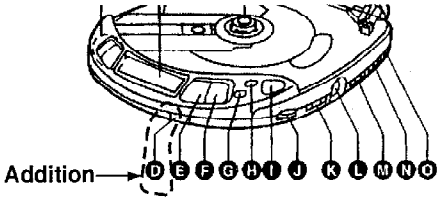
Ⓞ Anti-shock switch (ANTI-SHOCK)
This function minimizes sound interruption when vibrations are encountered by utilizing audio data that has been stored ahead of time (up to approximately 3 seconds' worth).

SL-S332C (P)

Ⓚ LIVE/XBS selector (LIVE, XBS, OFF)

Ⓓ Remote sensor (SENSOR) ← **Addition**

Ⓞ Extra anti-shock switch (EXTRA ANTI-SHOCK)
This function minimizes sound interruption when vibrations are encountered by utilizing audio data that has been stored ahead of time (up to approximately 10 seconds' worth).



■Change in Replacement Parts List

(SL-S220/S225/S221C Service Manual of pages 34, 35, 37, 38.)

Notes:
- Mentioned in this parts list is only those different from Model No. SL-S221C (P). All other parts are the same as for SL-S221C (P).
- Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- [M] indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Change of Part No.		Part Name & Description	Remarks
	SL-S221C (P) →	**SL-S332C (P)**		
INTEGRATED CIRCUIT(S)				
IC503	LH6456K2	**MNV4400-T8T**	IC	[M]
TRANSISTOR(S)				
Q19	—	**UN5213TX**	TRANSISTOR	[M] **Addition**
Q20	—	**DTA114YUA106**	TRANSISTOR	[M] **Addition**
Q21	—	**UN521MTX**	TRANSISTOR	[M] **Addition**
Q22	—	**UN5213TX**	TRANSISTOR	[M] **Addition**
Q81	UN521MTX	—	—	[M] **Deletion**
Q306	—	**UN521NTX**	TRANSISTOR	[M] **Addition**
Q507	UN511NTX	—	—	[M] **Deletion**
COMPONENT COMBINATION(S)				
Z501	—	**RCDRS-52**	REMOTE SENSOR	[M] **Addition**
SWITCH(ES)				
S701	RSS2B028-A	**RSS3B018-A**	SW	[M]
RESISTOR(S)				
R541	—	**ERJ3GEYJ470V**	1/16W, 47Ω	[M] **Addition**
R542	—	**ERJ3GEYJ102V**	1/16W, 1KΩ	[M] **Addition**
R543	—	**ERJ3GEYJ334V**	1/16W, 330KΩ	[M] **Addition**
R745	—	**ERJ3GEYJ822V**	1/16W, 8.2KΩ	[M] **Addition**
CHIP JUMPER(S)				
RJ502	—	**ERJ3GEY0R00V**	CHIP JUMPER	[M] **Addition**
RJ504	—	**ERJ3GEY0R00V**	CHIP JUMPER	[M] **Addition**
RJ505	—	**ERJ6GEY0R00Z**	CHIP JUMPER	[M] **Addition**
RJ506	ERJ3GEY0R00V	—	—	[M] **Deletion**

Ref. No.	Change of Part No. SL-S221C (P) ➡ SL-S332C (P)		Part Name & Description	Remarks
CAPACITOR(S)				
C15	—	**RCST1AY475RE**	10V, 4.7μF	[M] **Addition**
C528	—	**RCST1AY475RE**	10V, 4.7μF	[M] **Addition**
C529	—	**ECUZNC104ZFV**	16V, 0.1μF	[M] **Addition**
C725	—	**ECUVNC105ZFN**	16V, 1μF	[M] **Addition**
CABINET AND CHASSIS				
6	RFKJLS221CPH	**RFKJLS332CPS**	BOTTOM CABINET ASS'Y	[M]
8	RYF0443J-H	**RYF0443F-S**	CD COVER ASS'Y	[M]
9	RYK0718A-K	**RYK0718E-K**	INTERMEDIATE CABINET ASS'Y	[M]
12	—	**RKW0500-K**	FILTER	[M] **Addition**
PACKING MATERIAL				
P1	RPN1067	—	—	[M] **Deletion**
P2	RPN1068	—	—	[M] **Deletion**
P3	RPQ0684	—	—	[M] **Deletion**
P8	—	**RPQ0677**	SPACER	[M] **Addition**
P9	—	**RPK0898**	PACKING CASE	[M] **Addition**
P10	—	**RPF0111**	PROTECTION BAG (UNIT)	[M] **Addition**
ACCESSORIES				
A1	RQT4055-P	**RQT3825-P**	INST. MANUAL(CAR MOUNT KIT)	[M] <IA>
A5	SH-CDM8B	**SH-CDM8ASY-K**	CAR STEREO CASSETTE ADAPTOR	[M]
A11	—	**RAK-SL927WH**	WIRELESS REMOTE CONTROLLER	[M] **Addition**
A11-1	—	**RFKMLS332CPS**	BATTERY CASE FOR W.R.C.	[M] **Addition**
A12	—	**RMF0255**	MAGIC TAPE	[M]**Addition**

Note: ● The "< IA >: English " marks in Remarks indicate language of instruction manual.

■Schematic Diagram (SL-S220/S225/S221C Service Manual of pages 24～28.)

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

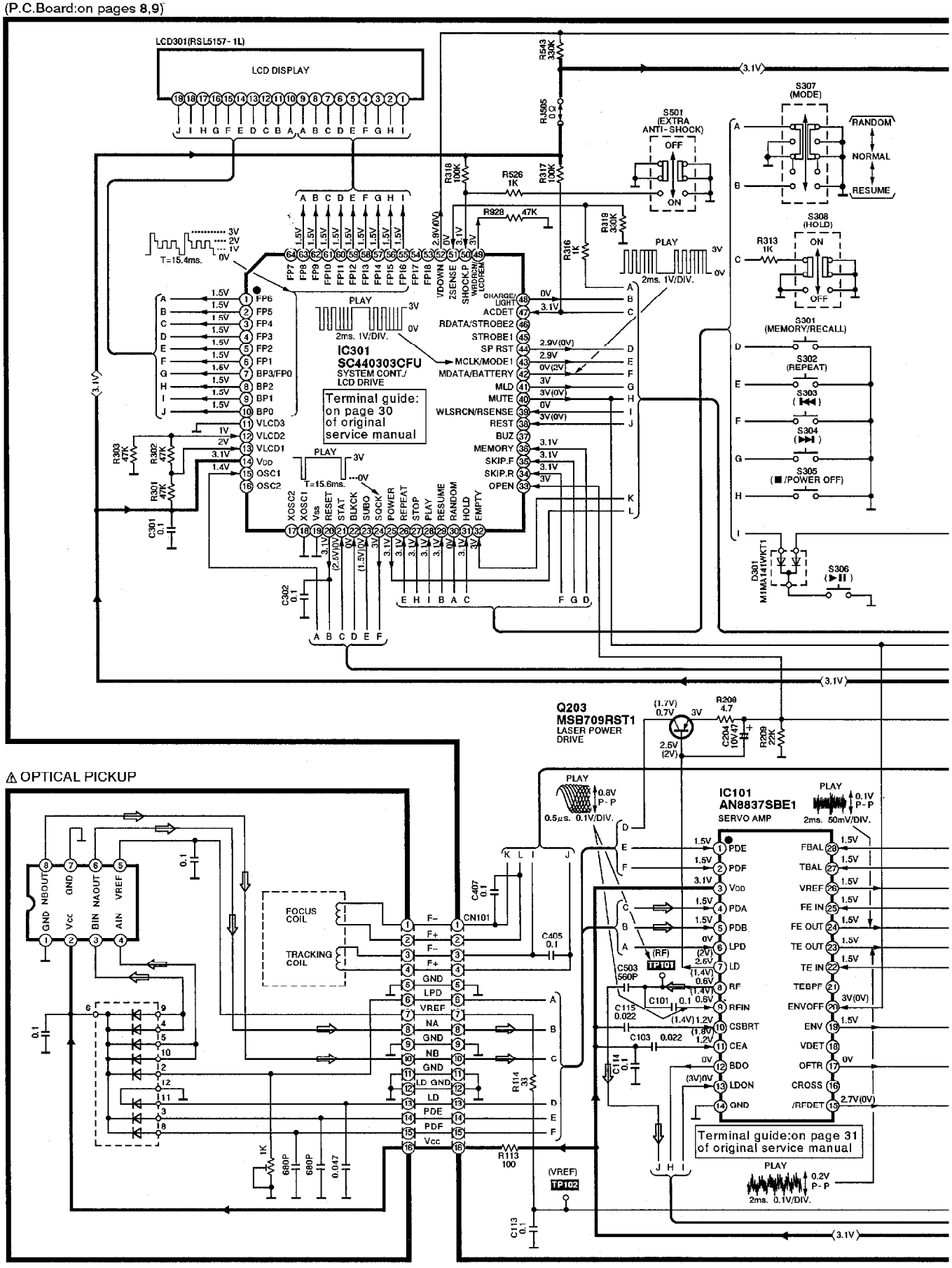
- **S201**: Laser ON/OFF switch in "OFF" position. (It turns "ON" with disc holder closed.)
- **S202**: Rest detector in "OFF" position. (It turns "ON" when optical pickup comes to innermost periphery.)
- **S301**: Memory/recall (MEMORY/RECALL) switch.
- **S302**: Repeat (REPEAT) switch.
- **S303**: Skip/search (▶▶▌/▶▶ , ▌◀◀/◀◀) switches.
  S304: [S303: GO BACK, S304: ADVANCE]
- **S305**: Stop/power off (■ /POWER OFF) switch.
- **S306**: Play/pause (▶ /▌▌) switch.
- **S307**: Play mode selector (MODE) in "RANDOM" position. (RANDOM←→NORMAL←→RESUME)
- **S308**: Hold (HOLD) switch in "OFF" position.
- **S501**: Extra Anti-shock (EXTRA ANTI-SHOCK) switch in "OFF" position.
- **S701**: LIVE/XBS selector (LIVE, XBS, OFF) in "OFF" position.
- **VR11**: Power supply voltage adjustment.
- **VR701-1, 2** : Headphones volume (VOLUME) control.
- The voltage value and waveforms are the reference voltage of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN Jack). Accordingly, there may arise some errors in the voltage values and waveforms depending upon the internal impedance of the tester or measuring unit.
- Measurement conditions:
  * AC adaptor is used for power supply.
  * Set the HOLD and EXTRA ANTI-SHOCK switches to ON.
  * The parenthesized is the voltage for test disc (1 kHz, L+R, 0 dB) in play mode, and the other, for no disc in stop mode.
- ➡ : Positive voltage lines.
- ⇨ : Audio signal lines.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

Caution!

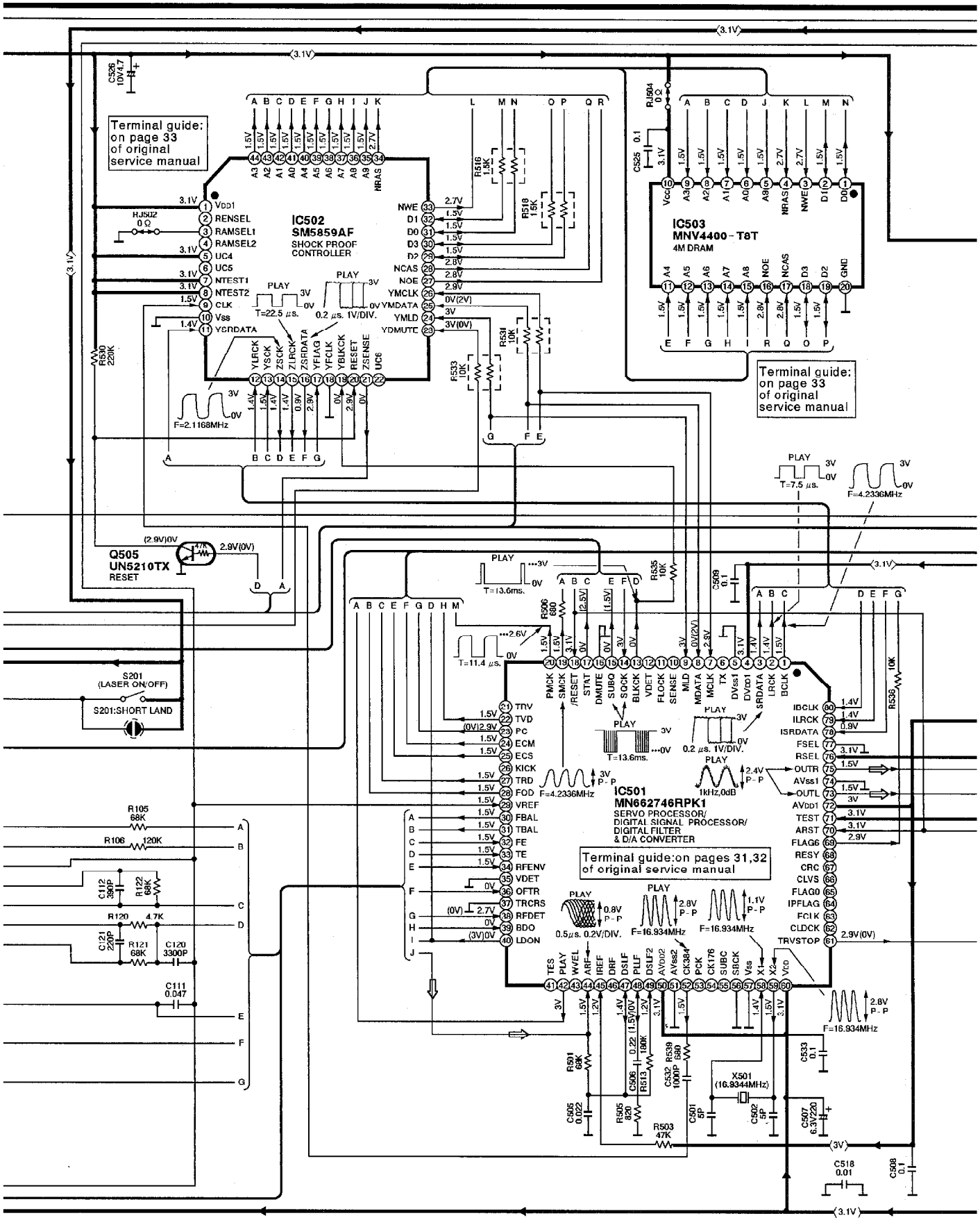
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

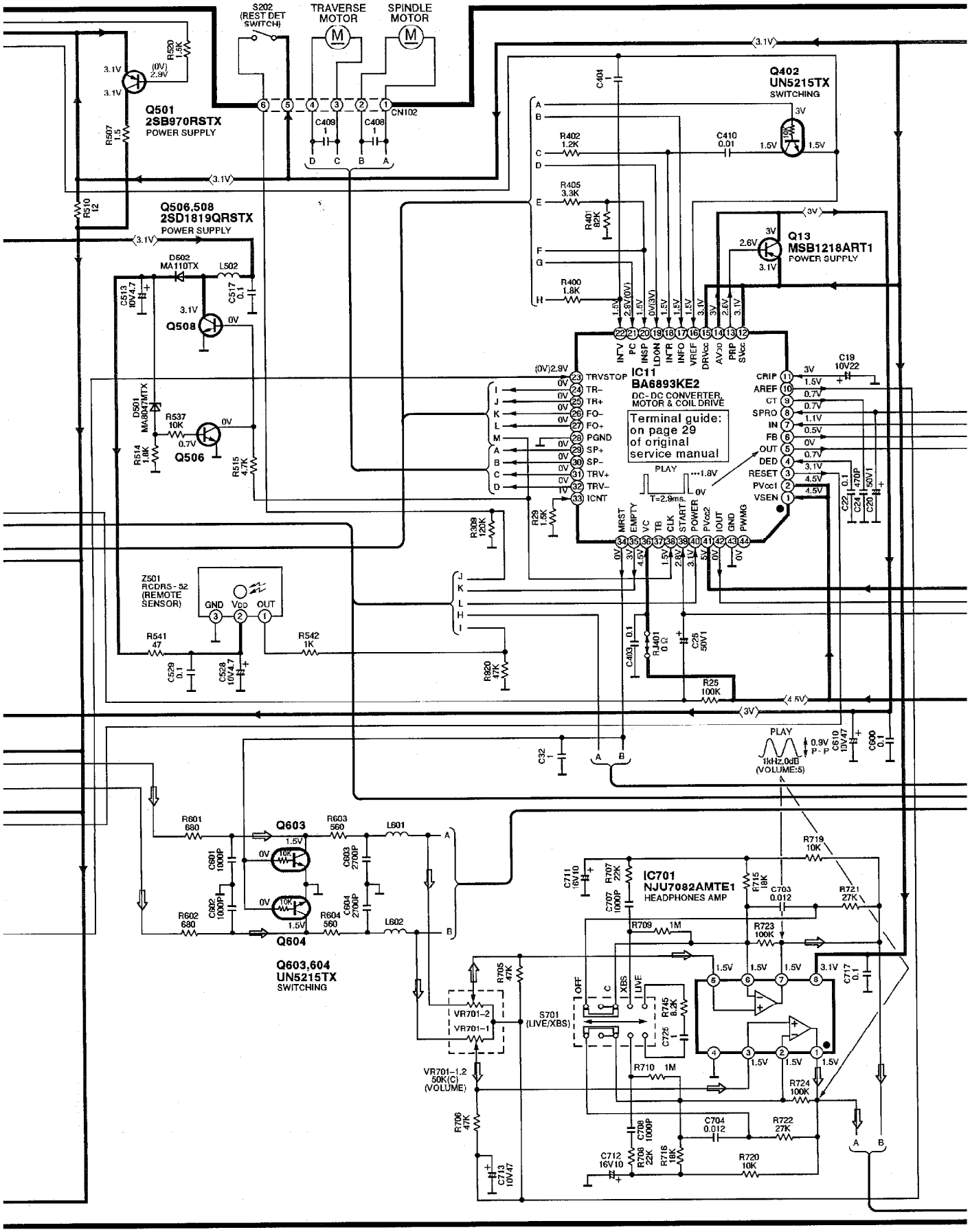
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.

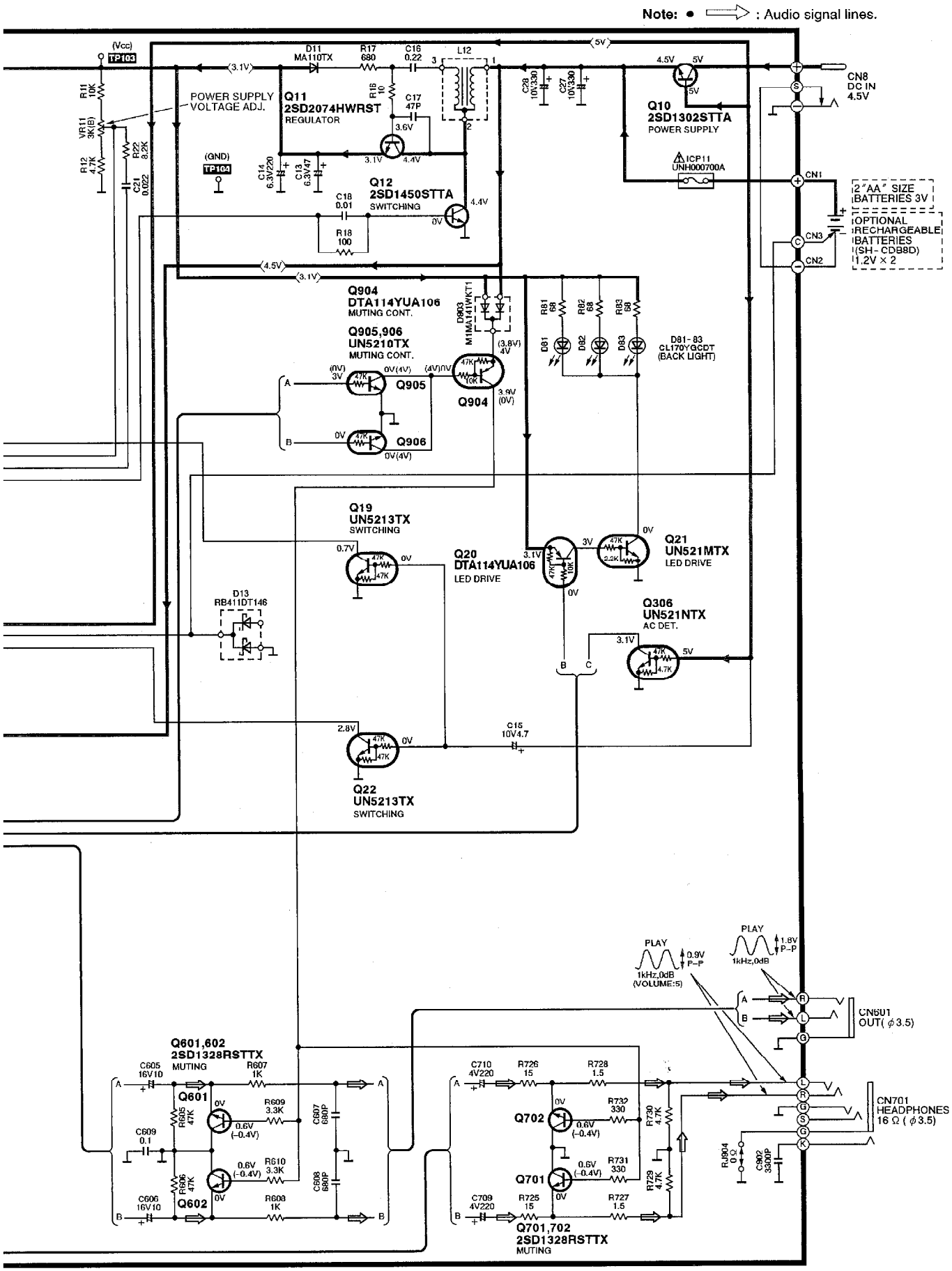
(P.C.Board:on pages 8,9)



Note: ● ⇨ : Audio signal lines.




S202
(REST DET SWITCH)
TRAVERSE MOTOR
SPINDLE MOTOR
CN102
Q501
2SB970RSTX
POWER SUPPLY
Q506,508
2SD1819QRSTX
POWER SUPPLY
Q508
Q506
Q402
UN5215TX
SWITCHING
Q13
MSB1218ART1
POWER SUPPLY
IC11
BA6893KE2
DC-DC CONVERTER, MOTOR & COIL DRIVE
Terminal guide: on page 29 of original service manual
TRVSTOP
TR-
TR+
FO-
FO+
PGND
SP+
SP-
TRV+
TRV-
ICNT
CRIP
AREF
CT
SPRO
IN
FB
OUT
DED
RESET
PVcc1
VSEN
Z501
RCDRS-52
(REMOTE SENSOR)
GND
VDD
OUT
Q603
Q604
Q603,604
UN5215TX
SWITCHING
IC701
NJU7082AMTE1
HEADPHONES AMP
S701
(LIVE/XBS)
VR701-1,2
50K(C)
(VOLUME)
PLAY
1kHz,0dB
(VOLUME:5)
0.9V P-P

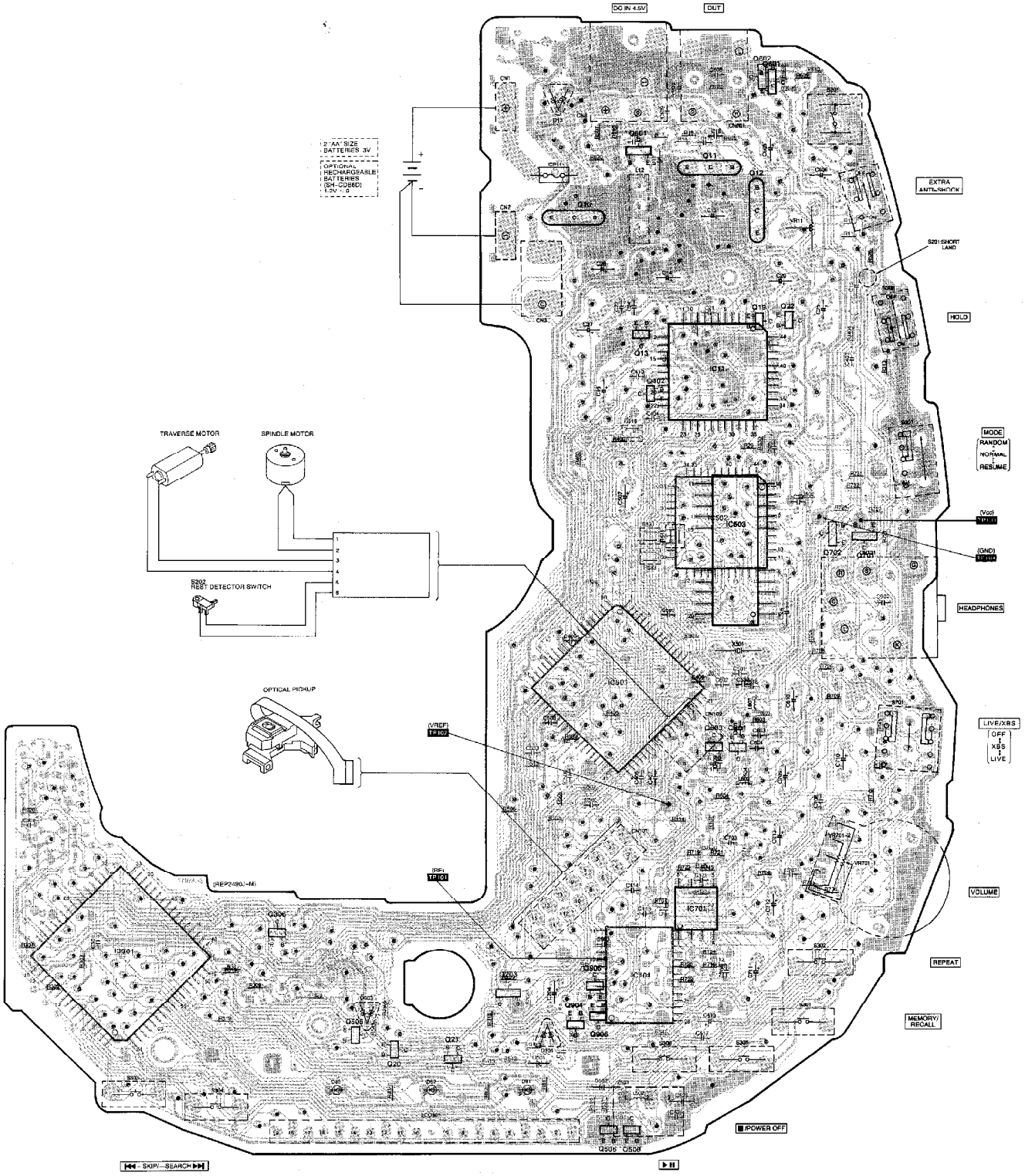

Note: ● ⇨ : Audio signal lines.
(Vcc)
TP103
D11 MA110TX
R17 680
C16 0.22
L12
5V
3.1V
4.5V
5V
CN8 DC IN 4.5V
R11 10K
VR11 3K(B)
R12 4.7K
R22 8.2K
C21 0.022
POWER SUPPLY VOLTAGE ADJ.
Q11 2SD2074HWRST REGULATOR
R16 10
C17 47P
3.6V
3.1V
4.4V
C28 10V330
C27 10V330
Q10 2SD1302STTA POWER SUPPLY
ICP11 UNH000700A
(GND)
TP104
C14 6.3V220
C13 6.3V47
Q12 2SD1450STTA SWITCHING
C18 0.01
R18 100
4.4V
0V
CN1
CN3
CN2
2 "AA" SIZE BATTERIES 3V
OPTIONAL RECHARGEABLE BATTERIES (SH-CDB8D) 1.2V × 2
4.5V
3.1V
Q904 DTA114YUA106 MUTING CONT.
D903 M1MA141WKT1
R81 68
R82 68
R83 68
D81
D82
D83
D81-83 CL170YGCDT (BACK LIGHT)
Q905,906 UN5210TX MUTING CONT.
(3.8V) 4V
(0V) 3V
0V(4V)
(4V)0V
Q905
Q904
3.9V (0V)
Q906
0V(4V)
A
B
Q19 UN5213TX SWITCHING
0.7V
0V
Q20 DTA114YUA106 LED DRIVE
3.1V
3V
Q21 UN521MTX LED DRIVE
D13 RB411DT146
Q306 UN521NTX AC DET.
3.1V
5V
B
C
2.8V
C15 10V4.7
Q22 UN5213TX SWITCHING
PLAY
1kHz,0dB (VOLUME:5)
0.9V P-P
PLAY
1kHz,0dB
1.8V P-P
CN601 OUT(φ3.5)
Q601,602 2SD1328RSTTX MUTING
C605 16V10
R607 1K
Q601
R605 47K
R609 3.3K
0.6V (-0.4V)
C609 0.1
C607 680P
R610 3.3K
R606 47K
C608 680P
C606 16V10
Q602
R608 1K
C710 4V220
R726 15
R728 1.5
Q702
R732 330
R730 4.7K
Q701
R731 330
R729 4.7K
C709 4V220
R725 15
R727 1.5
Q701,702 2SD1328RSTTX MUTING
CN701 HEADPHONES 16 Ω (φ3.5)
RJ904 0Ω
C902 3300P

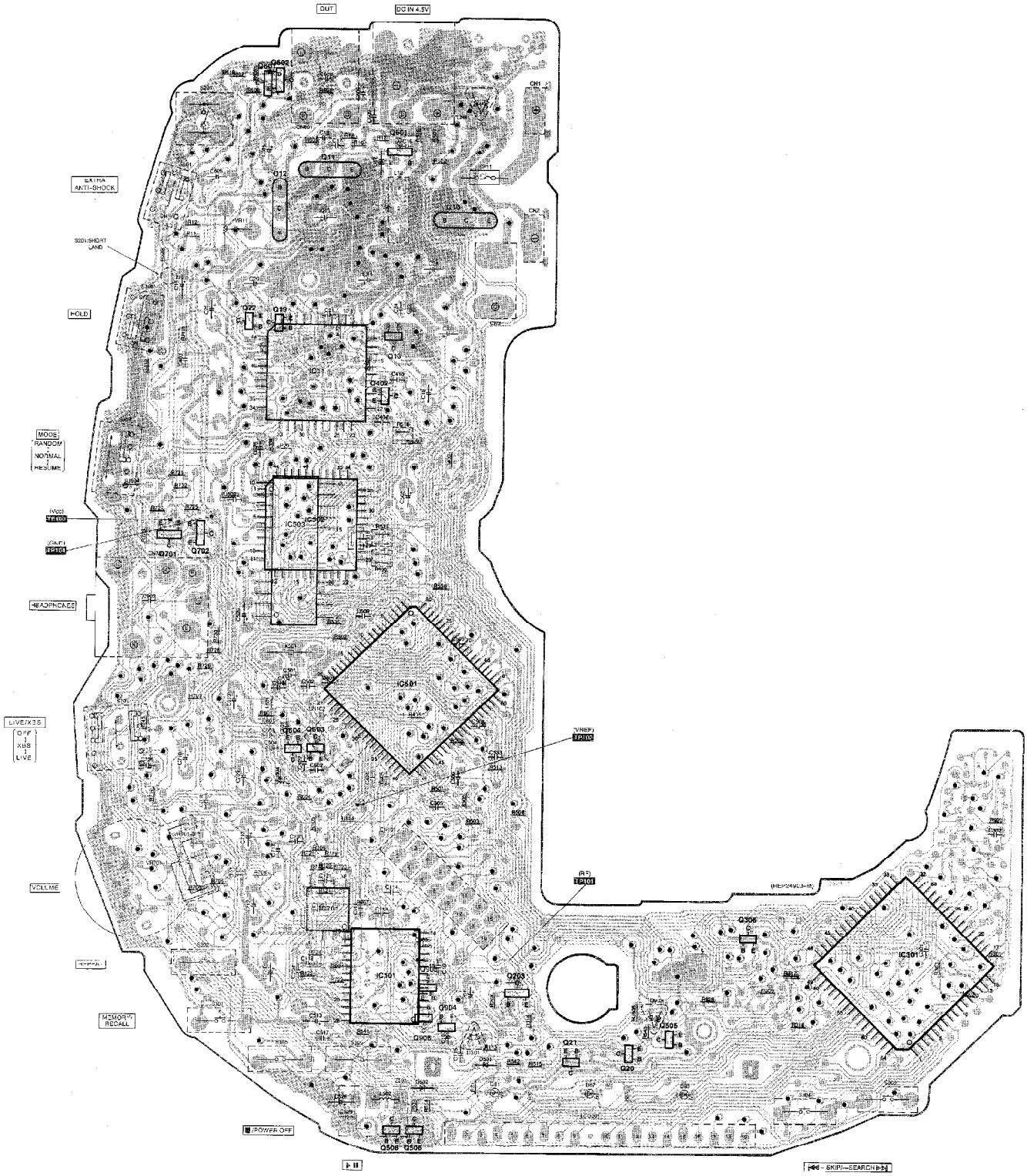
■Printed Circuit Board and Wiring Connection Diagram

(SL-S220/S225/S221C Service Manual of pages 22, 23.)

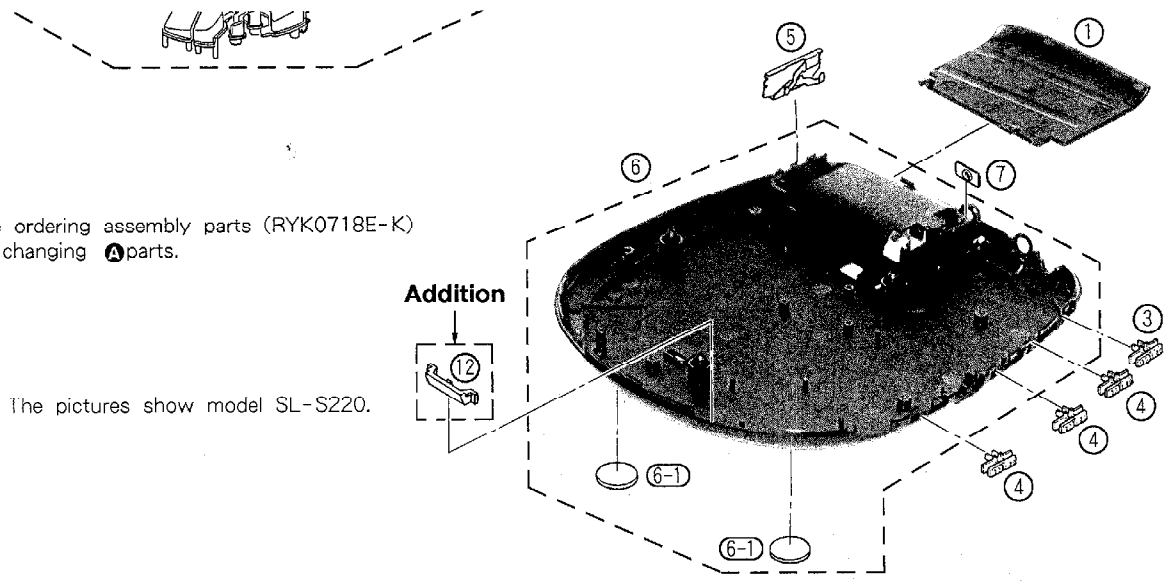
Notes:

- This printed circuit board diagram may be modified at any time with the development of new technology.
- In this printed circuit board diagram, the parts and foil patterns on the board facing toward you are printed in black.
  The opposite side is printed in blue.
- The " ● " and " ● " marks denote the connection points of double-faced foil patterns (through holes) on both sides of the printed circuit board.

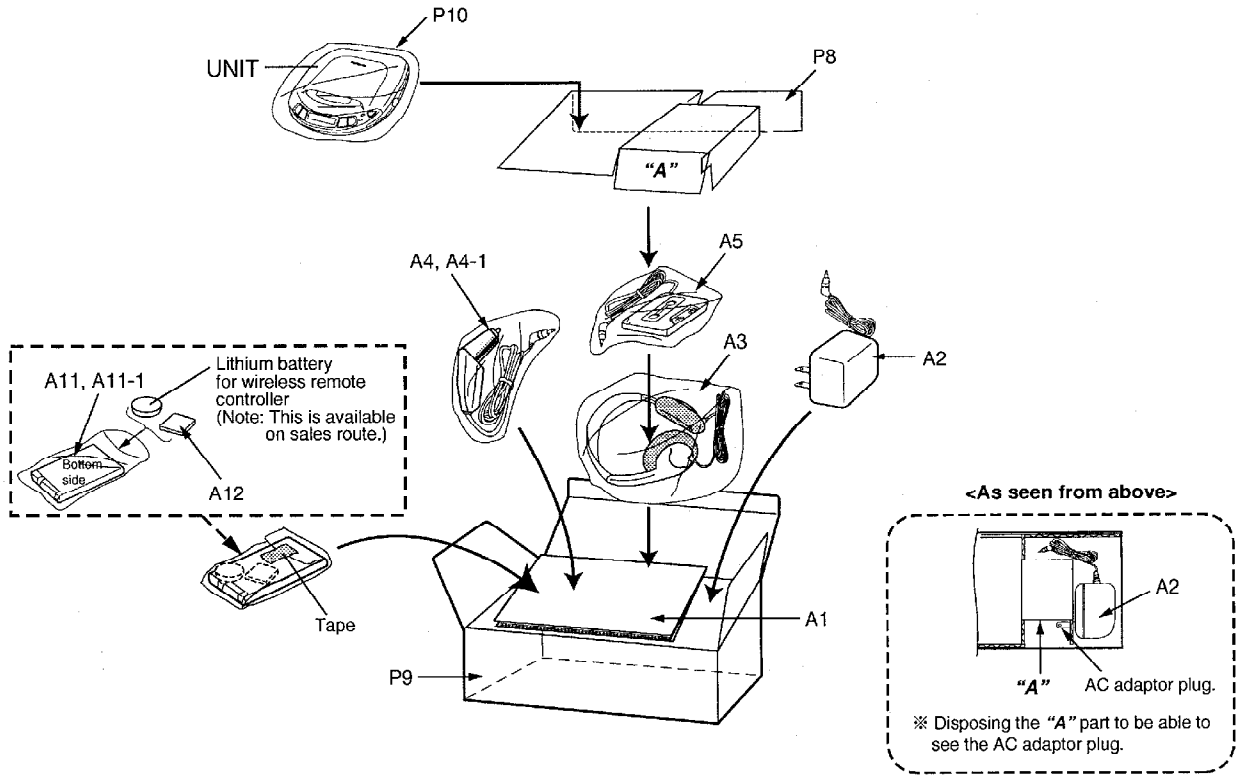



OUT
DC IN 4.5V
EXTRA ANTI-SHOCK
HOLD
MODE
RANDOM
NORMAL
RESUME
HEADPHONES
LIVE/X-BS
OFF
X-BS
LIVE
VOLUME
MEMORY RECALL
/POWER OFF
SKIP/—SEARCH
IC501
IC503
IC101
IC301
VREF
TP102
(RF)
TP101

■Cabinet Parts Location (SL-S220/S225/S221C Service Manual of page 36.)



■Packaging (SL-S220/S225/S221C Service Manual of pages 38~40.)



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